

NORTHWOODS JOURNAL – JUNE 2019

A Free Publication about Enjoying and Protecting Marinette County’s Outdoor Life

In This Issue:

Climate Change and Lakes	1
Annual Harmony Bird Hike	1
Youth Bows Available	2
National Pollinator Week	2
WI Monarch Collaborative	3
Birds Eat Tons of Bugs!	3
Wisconsin Envirothon Winners	4
Fee-Free Weekend on WI State Lands, June 1-2	4
Kids Need More Time Outside	5
Plants for Birds	6
Environmental Poster Contest	6
Breakfast on the Farm	7
Area Events Calendar	8
Harmony Arboretum Calendar	8



Annual Bird Hike at Harmony Arboretum



Join Greg Cleereman, Marinette County Conservationist, on **Saturday, June 1, at the Harmony Arboretum from 6:00-8:00 a.m.** Learn to identify birds by sight and song, and enjoy the scenery of the prairie and upland hardwoods. Over the years, about 80 bird species have been found here, including bobolink and black-billed cuckoo.

Binoculars and bird identification books will be available, but bring your own if you wish. The route is moderate on internal trails and roads. Insect repellent is recommended. Harmony Arboretum is located seven miles west of the City of Marinette off of Highway 64, then ½ mile south on County E. For more information, call the LWCD office at 715-732-7780.

Climate Change – Coming to a Lake Near You

By Chuck Druckrey - Water Resource Specialist, Land & Water Conservation Division

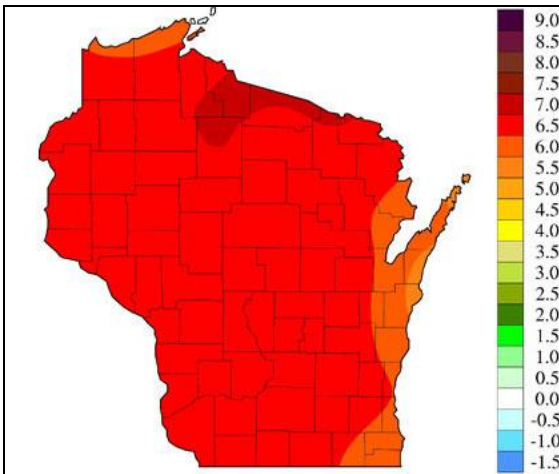
You don’t need a degree in physics or climatology to know that the weather, *which is our day-to-day experience* of the climate, has been changing. You might be tempted to chalk this up to our imperfect memories... ‘were the winters really colder and the snow deeper when I was a kid?’ Does it just seem like we have more flooding now? Well, data shows that they were, and we are.

The National Weather Service has operated 176 weather stations across Wisconsin that have collected daily temperature and precipitation data for more than 70 years. Data from these stations show that Wisconsin has warmed by 1.1°F since 1950 with the greatest warming of 2.5°F across Northern Wisconsin. Most of this warming has occurred during the winter (2.5°F) but winter in the north has warmed more than 4.5°F. This has resulted in far fewer days where the temperature falls below zero and a 12 day increase in the growing season.

The data also shows that Wisconsin has become wetter, with an average increase of 3.1 inches of precipitation. As with temperature, the changes in precipitation were not even across the state or season-to-season. Winter saw a modest increase in precipitation across the state but much of this came as rain. Spring and summer precipitation increased in central and southern Wisconsin but declined in the north.

The largest increase in rainfall has happened in the fall, especially in Northern Wisconsin. The nature of rain events has also changed. Since the 1950’s we have seen the number of severe rain events per decade double from 12 to 24. A severe rain event is defined as 2 or more inches of rain in 24 hours. Below are photos from recent flooding and road issues caused by severe rain events in Wisconsin.

All of these trends are expected to accelerate in the coming years. Wisconsin Initiative on Climate Change Impacts (WICCI) projections show Wisconsin warming by 4-9°F by the middle of the century with Northern Wisconsin warming the most. As we have seen in the past, the greatest warming is projected to occur in the winter. Overall, winters will be shorter by an average of four weeks and snowfall is predicted to decline by more than 14 inches.

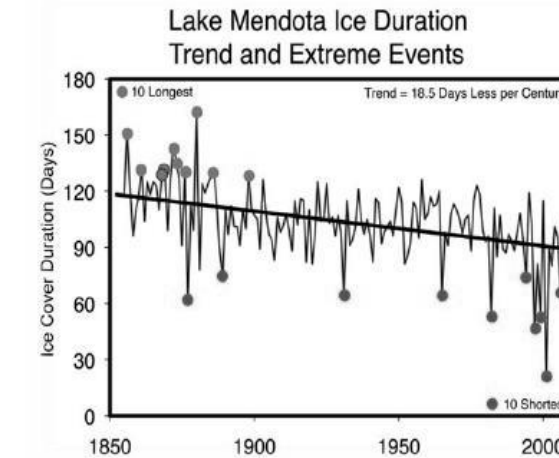


Climate models project significant warming across Wisconsin over the next few decades. This map shows the projected change in annual average temperature from 1980 to 2055.

WICCI also predicts that precipitation will increase in the fall and spring with more frequent and intense rain events. Winter precipitation is also predicted to increase but most of it will fall in the form of rain and freezing rain, resulting in decreased snow depth. Summers are predicted to have longer periods of hot dry weather with fewer but more intense rain events.

So how have these changes affected our lakes, and what can we expect going forward?

One of the most visible changes we have already seen in lakes is the reduction in ice cover. There are more than 150 years of ice cover data for five lakes spread across Wisconsin. In that time all have experienced a later freeze up and earlier ice breakup, with an average reduction in ice cover of nearly 20 days! On Lake Mendota records show that the 10-year average ice cover period has fallen by 43 days since 1855. By 2040 it’s predicted that lakes in central and southern Wisconsin will not have reliable ice cover... likely spelling the end of ice fishing on these waters. In the north the period of ice cover will be reduced by several weeks.



Continued next page



Flooding near Ontario, southwest WI






Road damage on Highway 2 in northwestern Wisconsin caused by severe rainfall



National Pollinator Week (June 17-23 this year) is a time to celebrate pollinators and spread the word about what you can do to protect them. Twelve years ago the U.S. Senate's unanimous approval and designation of a week in June as "National Pollinator Week" marked a necessary step toward addressing the urgent issue of declining pollinator populations. Pollinator Week has now grown into an international celebration of the valuable ecosystem services provided by bees, birds, butterflies, bats and beetles.

Without the actions of pollinators, agricultural economies, our food supply, and surrounding landscapes would collapse. Birds, bats, bees, butterflies, beetles, and other small mammals that pollinate plants are responsible for bringing us one out of every three bites of food. They also sustain our ecosystems and produce our natural resources by helping plants reproduce.

Pollinators travel from plant to plant carrying pollen on their bodies in a vital interaction that allows the transfer of genetic material critical to the reproductive system of most flowering plants – the very plants that...







-  bring us countless fruits, vegetables, and nuts, and ½ of the world's oils, fibers and raw materials
-  prevent soil erosion
-  increase carbon sequestration

This nearly invisible ecosystem service is a precious resource that requires attention and support - and in disturbing evidence found around the globe, is increasingly in jeopardy. Pollinator Partnership (P2) urges you know how this system supports you, and how your actions can help support healthy and sustainable pollination.

- ✓ About 75% of all flowering plant species need the help of pollinators to move their heavy pollen grains from plant to plant for fertilization.
- ✓ About 1,000 of all pollinators are vertebrates such as birds, bats, and small mammals.
- ✓ Most pollinators (about 200,000 species) are beneficial insects such as flies, beetles, wasps, ants, butterflies, moths, and bees.

I'M TAKING THE SUSTAINABLE YARD PLEDGE



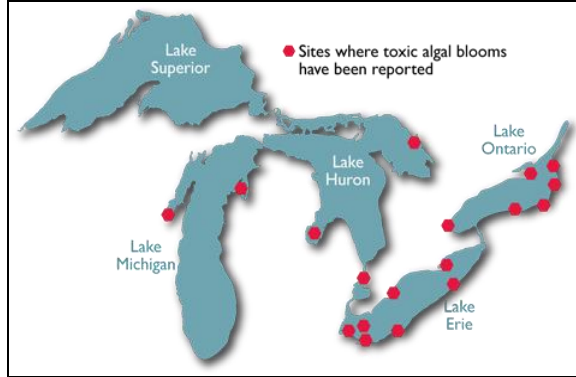
-  SHRINKING THE LAWN
-  INSTALLING NATIVE PLANTS
-  USING NO PESTICIDES
-  USING NO MOSQUITO SPRAY
-  SWITCHING TO ELECTRIC EQUIPMENT
-  USING QUIET EQUIPMENT
-  USING LESS WATER



Pollinator Friendly Yards On Facebook

Climate, continued from page 1

Increased rainfall on frozen ground in the winter and early spring, and the increase in severe rain events, will result in more sediment and nutrients reaching our lakes. Combined with warmer summers, this sets the table for more frequent severe algae blooms, particularly the nuisance-causing blue-green algae which can produce toxins, creating health hazards for humans and pets. The longer growing season will also result in the increased growth of aquatic plants.



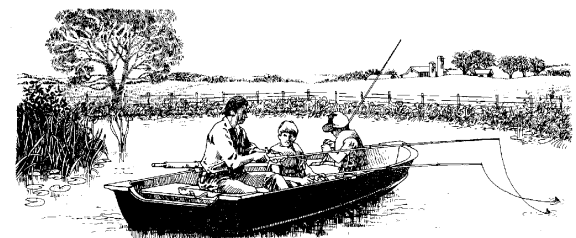
The spread of aquatic invasive species is also predicted to worsen. Currently Wisconsin lakes are "protected" from several aquatic invasive species that cannot survive our severe winters and prolonged ice cover. As winter temperatures moderate and ice cover is reduced, our lakes will become vulnerable to an increasing number of southern species as they expand their range northward.

The effect on lake levels will vary by lake type and location. Seepage lakes located higher in the watershed will likely see declining water levels due to reduced summer rainfall and increased evaporation. Drainage lakes lower in the watershed will experience more frequent flooding due to increasing winter and spring rainfall. All lakes can expect to see increased water level fluctuations due to more frequent severe rain events. Fluctuating lake levels can have wide-ranging impacts on aquatic plant and algae growth, water quality, and fish habitat.

Changes in temperature and ice cover will also have significant effects on fisheries in Wisconsin's lakes and streams. Fish managers are already seeing walleye populations declining in many Northern Wisconsin Lakes. This is predicted to get much worse. According to University of Minnesota Researcher Gretchen Hansen, Wisconsin has more than 325,000 acres of water dominated by cool-water species such as walleye and smallmouth bass. With the projected warming this will shrink to 47,800 acres by 2040. Warm-water species like largemouth bass and bluegill will benefit from warming lakes and their range is expected to double from 188,000 acres to 414,000 acres.

Warming has already had negative impacts on trout in Wisconsin lakes and streams. Under the "best-case" scenario where we have an additional 2 degrees of warming trout will disappear from most Wisconsin lakes and the brook trout population in streams will decline by 44%. Under the "moderate-case" scenario (4.5 degrees of warming) 94% of all trout waters in the state will become too warm to support brook trout. With 9 degrees of warming, native brook trout may become an endangered species in Wisconsin!

Whatever your "beliefs" about climate change, the data shows it's already here and the effects will continue to fundamentally alter our lakes and other natural communities. Next month I will explore what we can do to adapt and prepare for the future.



The Wisconsin Initiative on climate Change Impacts (WICCI) was formed in 2007 to study the impacts of climate change on the people of Wisconsin and our abundant natural resources. The group started with more than 40 researchers from the UW-Madison and WDNR and grew to include hundreds of researchers and collaborators from more than 87 state and federal agencies, municipalities, universities, tribal and nonprofit organizations, and private sector businesses. Among the 16 working groups were researchers that studies and reported on climate, water resources, and cold-water fisheries. Data and reports from the **Wisconsin Initiative on Climate Change Impacts** can be found at <http://www.wicci.wisc.edu/>.

More information on Wisconsin's climate can be found at the **Wisconsin State Climatology Office** at <http://www.aos.wisc.edu/~sco/>.



Youth Bows Available



Marinette County has obtained a set of youth bows for use by scout and service groups, schools, and at organized events. We can provide all the equipment needed for up to twelve children at once to enjoy target shooting. Archery can be a gateway to outdoor fun and learning a lifelong skill.

The Genesis bows are from the *National Archery in the Schools Program* (NASP) and are universal draw length compound bows with zero let-off and have an adjustable draw weight from 10 to 20 pounds. Almost any archer will be able to draw and accurately shoot one of these bows. The equipment also includes arrows, targets, bowstands, and a cloth background.

The archery equipment is offered through the Marinette County Land Information Department. If you are interested in borrowing the bows for your group or event, contact the Marinette County Land Information Office at 715-732-7780.

Northwoods Journal Online

Would you like to read current issues of the *Northwoods Journal* online? Go to www.marinettecounty.com and search for "Northwoods Journal". We can also send you an e-mail reminder when each new issue is posted online. Contact Anne Bartels, Information & Education Specialist at 715-732-7784 or email abartels@marinettecounty.com.

Insect-Eating Birds Consume 400-500 Million Metric Tons of Prey Annually

From <http://www.sci-news.com/biology/insect-eating-birds-06181.html>



Birds, represented by nearly 10,700 species, are found across the world in all major land ecosystems. They exhibit a large variety of life styles and foraging behaviors. While some birds depend mainly on plant diets, such as seeds, fruits, and nectar, others feed as carnivores on animal prey, or as omnivores on a mixed diet of plant/animal matter. Most bird species (more than 6,000 species) are insectivores that depend for the most part on insects as prey.

"Birds are an endangered class of animals because they are heavily threatened by factors such as afforestation, intensification of agriculture, spread of systemic pesticides, predation by domestic cats, collisions with man-made structures, light pollution and climate change," said lead author Dr. Martin Nyffeler, a researcher at the University of Basel, Switzerland.

"If these global threats cannot soon be resolved, we must fear that the vital ecosystem services that birds provide - such as the suppression of insect pests - will be lost." Birds actively hunt insects especially during the breeding season, when they need protein-rich prey to feed to their nestlings. "The global population of insectivorous birds annually consumes as much energy as a megacity the size of New York," Dr. Nyffeler noted. "They get this energy by capturing billions of potentially harmful herbivorous insects and other arthropods."



Birds in forests account for over 70% of the global annual prey consumption of insect-eating birds (about 300 million tons per year). Birds in savannas, grasslands, croplands, deserts, and Arctic tundra are less significant contributors (about 100 million tons of insects per year). "The estimates emphasize the ecological and economic importance of insectivorous birds in suppressing potentially harmful insect pests on a global scale - especially in forested areas," Dr. Nyffeler said.

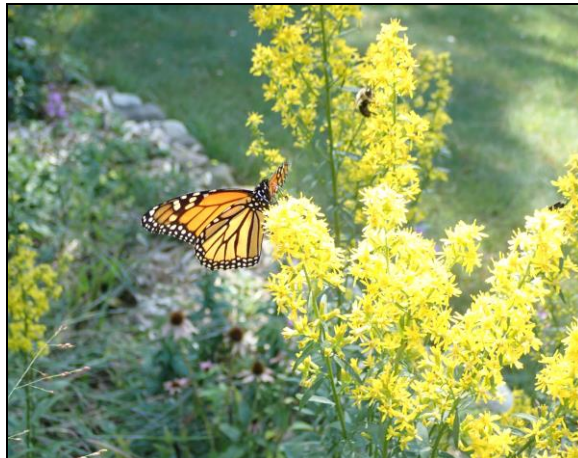
"Only a few other predator groups such as spiders and entomophagous (insect-eating) insects - including in particular predaceous ants - can keep up with the insectivorous birds in their capacity to suppress plant-eating insect populations on a global scale."

The team also estimated that the world's insectivorous birds have a total weight of around 3 million tons. "The comparatively low value for the global biomass of wild birds can be partially explained through their very low production efficiency," Dr. Nyffeler said. The findings will be published in the August 2018 issue of *The Science of Nature*.

While monarchs rest in winter, it's time to get busy adding habitat for their return

From: <https://dnr.wi.gov/news/weekly/?id=668#art6>
Published January 2019

MADISON - While Wisconsin monarchs rest and refuel after a 1,700-plus mile flight to their wintering grounds in Mexico, state residents can help them this winter by planting or planning habitat now and taking other actions to help monarchs.



A new website launched by the **Wisconsin Monarch Collaborative**, a coalition of organizations dedicated to reversing dramatic monarch declines in Wisconsin, provides a wealth of state-specific information on planting habitat that will benefit monarchs and other pollinators. The website is found at wimonarchs.org.



"Monarchs are resting this time of year but we're not," says Brenna Jones, coordinator for the Wisconsin Monarch Collaborative and a conservation biologist for Wisconsin Department of Natural Resources Natural Heritage Conservation Program, one of the partners.

"Planting milkweed and nectar plants is the best way to help monarchs, and now is a good time to plant seeds or to plan what plants you'll add to your garden next spring. Our new website gives you specific information to help you do that."



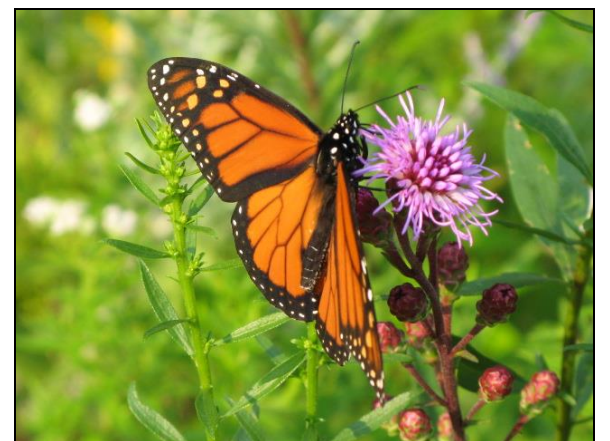
The Monarch Collaborative website has an extensive "creating habitat" suite of pages with state-specific resources for creating habitat in urban and suburban areas, on farms, on protected lands and along roadsides and utility corridors. The resources include a *Top Twelve Species for Beginner Butterfly Gardens*, geared for Wisconsin gardeners

In Wisconsin, native milkweed and other native plant seeds require a prolonged period of cold before they will germinate and grow. Planting milkweed and nectar plant seeds now means the seeds will have good soil contact and be kept moist by winter snowfalls. Lightly raking the soil surface or sowing seed onto an inch or two of snow-covered ground are good ways to hide the seeds from wildlife that may try to eat some of your seeds before they can germinate, Jones says.



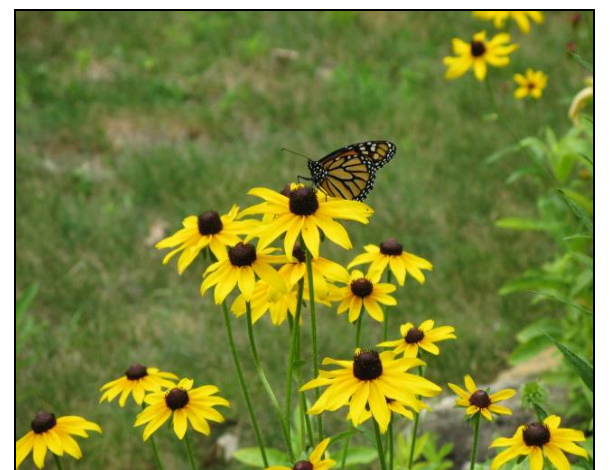
The *Wisconsin Monarch Collaborative* website also provides resources for highway and parks officials and land managers responsible for mowing and planting decisions, notes Brenna Marsicek, co-lead for the Wisconsin Monarch Collaborative's communications and outreach working group and communications director for Madison Audubon Society.

"Winter is a great time to plan and advocate for monarch habitat in your community," Marsicek says. "Begin the conversations with local road and park officials, community leaders, and others who can help provide space for monarchs to reproduce and thrive - specifically on milkweed and other native plants."



Monarch numbers have plunged more than 80 percent over the last 20 years in the eastern population that breeds in Wisconsin and 15 other Midwestern states. The leading cause of the decline is the loss of native milkweed species. Wisconsin Monarch Collaborative partners have set a goal for Wisconsin to add nearly 120 million stems of native milkweed species within a diverse mix of native wildflowers by 2038, and are designing voluntary strategies for stakeholders throughout the state to work together to achieve this goal.

Monarchs that spend their winters in Mexico leave in the spring and fly to the southern U.S. where they lay their eggs. The caterpillars that hatch from those eggs become the butterflies that make their way to Wisconsin in spring. The fourth or fifth generation of butterflies that hatch every year in Wisconsin then fly to Mexico for the winter, and the cycle begins again.



Contact(s): Brenna Jones, DNR, Wisconsin Monarch Collaborative coordinator, 608-576-2446; Caitlin Williamson, Natural Resources Foundation of Wisconsin, 608-266-1430



High School and Middle School Students Compete in the 2019 Wisconsin Envirothon

By Kim Warkentin, Wisconsin Land+Water Operations Manager/Youth Education Director

WI Land+Water's Envirothon, sponsored by the Outdoor Heritage Education Center and many other supportive organizations, was held at the Wisconsin Lions Camp on Friday, April 12, 2019 in Rosholt. The Wisconsin Envirothon is the state's ultimate middle and high school environmental science challenge, where teams of four to five high school or middle school students participate in four hands-on field challenges designed by natural resources professionals and educators. The exams test the students' knowledge in four categories: forestry, soils/land use, aquatic ecology, and wildlife.



Schools from across the state spent a snow-filled spring day at the stations, applying critical thinking and teamwork skills to solve the multiple hands-on challenges. At the forestry station, students identified tree species and measured tree diameters in the woods. The soils and land use station challenged students to assess the engineering and agronomic properties of soils. Students also identified aquatic invertebrates and invasive plants at the aquatic ecology station, as well as wildlife pelts and tracks at the wildlife station. Additionally, they tested their classroom knowledge on written exams.

"The Wisconsin Envirothon is a great way to demonstrate knowledge about the environment in a competitive manner," said Trent Vollendorf, a student from Ladysmith High School.

Finally, the students created a team presentation based on this year's current issue, *Agriculture and the Environment: Knowledge & Technology to Feed the World*. The team presentation provides an opportunity to apply fundamental knowledge and reasoning to understand and articulate today's critical environmental concerns. Ultimately, participating in Wisconsin Envirothon helps students develop knowledge and skills to either pursue careers in conservation or use their knowledge to preserve our natural resources in their future civic and career choices. "The Envirothon gave my students the opportunity to participate in a practical field experience, which helped them understand the complexities and conflicts between natural resources and production agriculture," said Cindy Landers, a Hudson High School Agriculture Science Teacher and

FFA Advisor. "The students learned to work as a team to develop a solution to a real life problem. As always, they had a great time and look forward to returning next year."

The overall winner for the high school category will advance to the national competition, representing Wisconsin at the National Conservation Foundation-Envirothon, taking place at North Carolina State University in Raleigh, North Carolina, July 28-August 2, 2019.

The following teams won first place:

- **Overall: High School** - Onalaska High School, **Middle School** - Fox River Academy
- **First Place FFA School** - Pulaski High School FFA
- **Aquatic Ecology: High School** - Onalaska High School, **Middle School** - Fox River Academy
- **Forestry: High School** - Pulaski High School FFA, **Middle School** - Fox River Academy
- **Soils and Land Use: High School** - Middleton High School, **Middle School** - Fox River Academy
- **Wildlife: High School** - Pulaski High School FFA, **Middle School** - Fox River Academy
- **Team Presentations: High School** - Onalaska High School, **Middle School** - Fox River Academy



For a complete list of second and third place winners and sponsors, please visit our website at: <https://wisconsinlandwater.org/events/envirothon>, or visit WI Envirothon on Facebook at: <https://www.facebook.com/wienvirothon>.

The Wisconsin Envirothon is a program of the Wisconsin Land+Water Conservation Association's Youth Education Committee and is made possible in part by the many generous volunteers, natural resource professionals, and educators. The Wisconsin Envirothon also relies on the support of many of our agency partners, county conservation departments, businesses and organizations dedicated to conservation.

Mosquito Control is hard on more than just mosquitoes . . .

<https://www.pollinatorfriendly.org/>

If you enjoy seeing fireflies and butterflies, and care about bees...think twice about mosquito spraying.

It's important to understand the consequences of killing mosquitoes with chemicals. Conscientious appliers avoid spraying flowering plants. But butterfly and moth caterpillars, and many other beneficial insects, eat the foliage of sprayed plants. Birds eat the insects. Without a healthy caterpillar population, we have fewer birds!

Some cities have aggressive mosquito control programs. The most commonly used insecticides are *organophosphates* and *pyrethroids*, which have broad-spectrum toxicity and **severely impact non-target invertebrates like butterflies, bees, fish, amphibians and birds**. These pesticides have been implicated in declines in wetland-associated and terrestrial wildlife including endangered species that live near treated areas. Even less-toxic products used to control immature mosquitoes can have negative impact on the wetland community by disrupting local food webs when they are applied repeatedly.

For more on what you can do, visit <https://xerces.org/> and download of "Help Your Community Create an Effective Mosquito Management Plan".



Fee-free Weekend on Wisconsin's State Lands, June 1-2, 2019

Free Fun Weekend in Wisconsin! No state park admission stickers or trail passes are required June 1-2. It is also **Free Fishing Weekend** when people may fish without fishing licenses or state trout stamps. Non-resident all-terrain vehicle operators do not need a non-resident trail pass to ride state ATV trails this weekend.



On the first full weekend in June, the following outdoors activities are free for Wisconsin residents and visitors alike!

- **Free entry** to state parks and forests
- **Free fishing**
- **Free DNR trails**
- **Free ATV/UTV riding on public trails open to such uses**

Marinette County State Parks & Forests

- ✓ *Menominee River State Recreation Area* is located in northeast Marinette County along several miles of the Menominee River.
- ✓ *Governor Thompson State Park* has more than 2,800 acres of woods, a campground, picnic areas & hiking trails, and 6 miles of shoreline on the Caldron Falls Flowage.
- ✓ The *Peshtigo River State Forest* has 25 miles of river, 3,200 acres of water and 9,200 acres of forest.

Visit <http://dnr.wi.gov/> & search for "Free Fun"



Saturday, June 1 is also **National Trails Day**.

For more information about National Trails Day and events near you, visit: <https://americanhiking.org/national-trails-day/> and www.iceagetrail.org, the Ice Age Trail Alliance.

Other sources for hiking opportunities in our area include:

- *Hemlock Curve Nature Trail & Woods Road Ski Trail* in the Peshtigo State Forest – guides available in the Land Information Office and on www.marinettecounty.com
- Marinette County Tourism at <http://www.therealnorth.com/> - at top click 'Maps & Guides' or go to "Where to Play" and click "recreation".



This Is Why Kids Need Less Time in Desks and More Time Outside

From: <https://www.scarymommy.com/kids-need-more-time-outside-2/>

Richard Louv, author of *Last Child in the Woods*, writes in *Orion Magazine* about a young boy who was hyperactive. He was kicked out of schools, and his parents, frankly, didn't know what to do with him. But they saw how much joy he took in the natural world, how it "engaged and soothed him." So for years, they frequented beach and forest, dune and river, to let their son immerse himself in the nature he loved best. A photograph of the boy, wide-eyed and joyful in the middle of a California beach storm, ran in *San Francisco Magazine*. The photo was taken in 1907. The boy's name was Ansel Adams, known to us now as the most famous nature photographer of the American West and a staunch environmental activist.



Yosemite Valley thunderstorm, Ansel Adams

The need for children to spend more time outside and less time in desks is not a new one, as Adams' life shows. But it's a need that's become more pressing as the century's turned, as one technological advance supersedes another at an alarming rate, as smartphones replace paper and crayons and Alexa threatens time-outs.



According to Nielson, 45% of kids 10-12 have a cellphone plan of their own. 16% received one when they were only 8 years old. And though 100% of teachers told a research project sponsored by *The Voice of Play* that recess was essential for children, those same kids only get an average of 25 minutes of recess per day. Only 16% of states, in fact, guarantee kids daily recess time.

Louv told *Orion Magazine* that, in a typical week, only 6% of children ages 9-13 "play outside on their own." Swimming, fishing, and bike-riding are all in sharp decline. There are lots of reasons parents keep their kids indoors - or kids keep themselves inside - including the allure of electronics, the need to study, dangerous traffic, and fear they'll be hurt. The most common reason is the ubiquitous terror of "Stranger Danger," though, as numerous reports have shown, violent crime against children has fallen to pre-1975 levels, and only about 100 children are kidnapped by strangers every year across the entire US.



Meanwhile, kids at the Nature Preschool at Irvine Nature Center in Owings Mill, Maryland, spend their days catching fistfuls of worms, going 'salamandering', and poking fox poop with a stick. Like many educators, their teachers believe kids need more time outdoors: "Hours of unstructured play in the natural world," says The Atlantic, "allows [kids] to develop as organically as any other animal." They learn creativity by observing the natural world and building their own imaginary ones. They learn to manage risk as "as they trip, stumble, fall, hurt, and right themselves." And with time in nature, research shows, kids even learn to focus better. Nature, basically, "reduces stress."

Psychologist Ari Hoffman, MA, LPC, says, "We live in a fabricated environment. This is not a bad thing as it results in central heating and A/C and little concern about the possibility of being attacked by a bear. However, the more we fabricate and try to control our environments, the more we discover that we have to also fabricate ways to approximate the elements of the unfabricated environment that contribute to our well-being."



Basically, we have to go to the gym to strengthen our muscles, instead of hauling wood and climbing hills. We hit buttons on the microwave instead of hunting for food. "Being in the unfabricated environment of the wilderness places physical, emotional, and attention demands that can effectively address the negative elements of things like anxiety and ADHD," Hoffman says.

Research has shown that a brief walk in the woods can lower anxiety and help ADHD. Moreover, "the basic act of living in the wilderness demands engagement," Hoffman says. This engagement, and its real-world consequences, develops creativity, inventiveness, inner strength, and discipline.

Most important, says Louv, is the sense of awe children experience: "For children, nature is one of the first windows into wonder. And for many children, that window is in danger of closing. Parents, grandparents, educators, and others who encourage children to experience nature, can ignite the senses, especially the sense of wonder." Any parent will tell you that their child needs these things, and desperately.

But there's more than feel-good intangibles to outdoor time. Studies have found that children who engage in learning in outdoor classrooms and "other forms of experiential education" have significant gains in social studies, science, language arts, and math, Louv says in *Orion*.

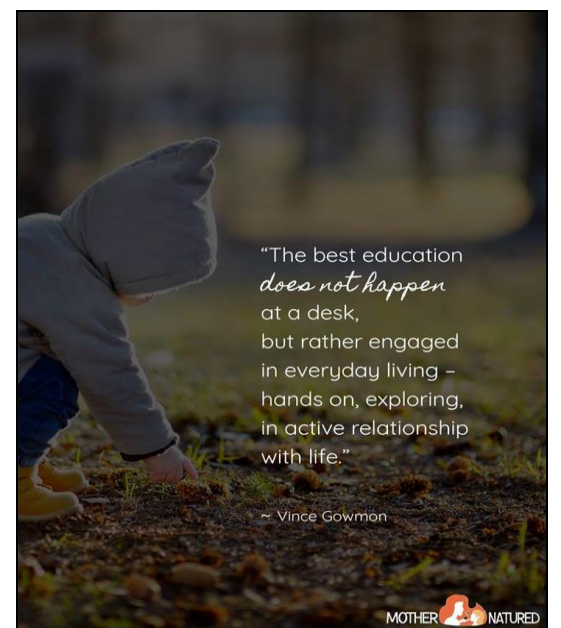
"One 2005 study by the California Department of Education," they cite, "found that students in outdoor science programs improved their science testing scores by 27 percent." The same article quotes the *Milwaukee Journal-Sentinel* report in 2006 that, "a 3-year-old can identify a cedar tree and a maple - even if she can't tell you what color pants she's wearing. And a 4-year-old can tell the

difference between squirrel and rabbit tracks - even if he can't yet read any of the writing on a map. *Young children learn through the sounds, scents, and seasons of the outdoors.*"



And it's no coincidence that children who spend time in nature grow to be people who care deeply about the earth. Louv also notes that, "Studies show that almost to person, conservationists or environmentalists - whatever we want to call them - had some transcendent experience in nature when they were children." *If we want our children to grow up to care about the world around, to solve the big problems facing our world - global warming, pollution - they first need to care. **And to care, they need to get outside.***

We need to think beyond the desks, beyond the homework, beyond the 25 minutes of recess - if they are lucky. Kids need to get dirty, to build forts, to ford creeks, to dam streams and turn over rocks. They need to discover animal poop and poke it with a stick: nothing can replace dissecting scat in the wild, not even dissecting owl pellets in the classroom. "Our world," Hoffman says, "would be a different place if children spent an hour a day in an unorganized setting in the outdoors."



Children would be calmer. They'd care about the earth. They'd have a chance to recharge, to unplug, to destress - to forget the pressures of the modern school system. But more importantly, they'd develop that sense of wonder. As Einstein said, "The most beautiful emotion we can experience is the mysterious. It is the power of all true art and science. He to whom this emotion is a stranger, who can no longer pause to wonder and stand rapt in awe, is as good as dead."

Children can find wonder in a handful of worms, in a tuft of grass. At the top of that pine tree we're afraid to let them climb, in that cold stream we're worried will chill their feet. Maybe it's time that we take them from their desks, set aside our fears, and drop them in the outdoors. We might be surprised at what happens.



Plants for Birds! Find out what plants are native in your area to help provide habitat for birds

From: <https://www.audubon.org/plantsforbirds>



Bring birds to your home today by growing native plants. With Audubon's *Native Plant Database*, you can find the best plants for the birds in your area. Growing bird-friendly plants will attract and protect the birds you love while making your space beautiful, easy to care for, and better for the environment.

Why Native Plants?

Your garden is your outdoor sanctuary. With some careful plant choices, it can be a haven for native birds as well. Landscaped with native species, your yard, patio, or balcony becomes a vital recharge station for birds passing through and a sanctuary for nesting and overwintering birds.

Each patch of restored native habitat is just that—a patch in the frayed fabric of the ecosystem in which it lies. By landscaping with native plants, we can turn a patchwork of green spaces into a quilt of restored habitat. *More native plants mean more choices of food and shelter for native birds and other wildlife.*

Better for Birds

To survive, native birds need native plants and the insects that have co-evolved with them. Most landscaping plants available in nurseries are exotic species from other countries. Many are prized for qualities that make them poor food sources for native birds—like having leaves that are unpalatable to native insects and caterpillars. With 96 percent of all terrestrial bird species in North America feeding insects to their young, planting insect-proof exotic plants is like serving up plastic food. No insects? No birds.

For example, research by entomologist Doug Tallamy has shown that native oaks support more than 550 different species of butterflies and moths alone. The non-native ginkgo tree supports just 5. Caterpillars are the go-to food source for migrant and resident birds alike. In the 16 days between hatching and fledging, a clutch of Carolina Chickadee chicks can down more than 9,000 of them.



Tallamy's work points to native landscaping as a key tool in increasing bird diversity and abundance. In a study of suburban properties in southeast Pennsylvania, for example, eight times more Wood Thrushes, Eastern Towhees, Veeries, and Scarlet Tanagers (all species of conservation concern) were found in yards with native plantings as compared with yards landscaped with typical alien ornamentals.

What's more, the habitat provided by native plants can help birds adapt and survive amid a changing climate. More than half of North American bird species are threatened by climate change, and native plants can help increase their resilience by giving them food and places to rest and nest.

Better for People

When you landscape with native species, you can spend more time with the birds and less time with the mower. How does that boost human health? During the growing season, some 56 million Americans mow 40 million acres of grass each week—an area eight times the size of New Jersey! Mowers and weed-whackers burn gasoline to the tune of 800 million

gallons per year, contributing to the greenhouse gases that drive global warming.

If you've ever filled a lawn mower or weed whacker with gas, you know that spills happen. The EPA estimates that Americans spill more than 17 million gallons of fuel each year while refueling lawn equipment, polluting the air and groundwater. Older, less efficient two-cycle engines release significant amounts of their oil and gas unburned. The less lawn you mow, the less air and water pollution you create.

Less lawn also means less noise pollution. According to the Noise Pollution Clearinghouse, a typical gas-powered push mower emits 85 to 90 decibels for the operator (90-95 for riding lawnmowers). That doesn't just scare away the birds - it can cause hearing loss over time.

By planting native species, you will also:

➤ Save water

According to the Environmental Protection Agency, 30 to 60 percent of fresh water in American cities is used for watering lawns. Native plants have adapted to thrive in their regional landscape, without added water or nutrients. With climate change models predicting increased episodes of extreme drought such as California is experiencing, it's a good time to shift to water-wise yards and native plants.

➤ Control flooding

Cultivating vertical structure in your yard by planting many different species of herbaceous flowering plants, shrubs, and trees creates layers of vegetation that deflect pounding rains, increasing the chance for water to be absorbed by your soil before running off into storm drains and streams.



➤ Use fewer chemicals

Less lawn mowing, fertilizing, and pesticide application means cleaner air and water. Homeowners apply nearly 80 million pounds of pesticides to lawns in the United States each year. What's more, they use up to 10 times more pesticides per acre on their lawns than farmers use on crops. During storms, lawn chemicals can be carried by runoff and wind, contaminating streams and wetlands many miles away.

Native plants are often hardier than non-native ornamentals and thrive without pesticides or fertilizers. Moreover, as you work to create a bird-friendly sanctuary in your yard, insects that may have seemed like pests before become allies. Since caterpillars are premium bird food, the holes they make in your oak's leaves are badges of success and the caterpillars themselves cause for celebration.

➤ Reduce maintenance

Less lawn means less time mowing, weed-whacking, and edging. Landscaping with native plants isn't maintenance free—invasive weed species are an ongoing issue in any garden. But with careful landscape planning and plant selection, you can create a garden space that minimizes the ongoing input of time and money. That's a mighty nice change from constant lawn care. And when the mower's tucked away, you can hear bird song in the silence that reigns.



➤ Create beauty

What does a beautiful outdoor space look like? What does it mean to have a "well-kept" yard? For decades, our standard of green beauty and orderliness has centered on a carpet-like lawn and manicured foundation plantings, an aesthetic that largely excludes birds and other wildlife, and has a hefty carbon footprint. By putting in native plants, you can create a colorful, visually appealing landscape that helps give birds a fighting chance in a changing world.



2019 National Association of Conservation Districts Environmental Poster Contest - "Life in the Soil – Dig Deeper"

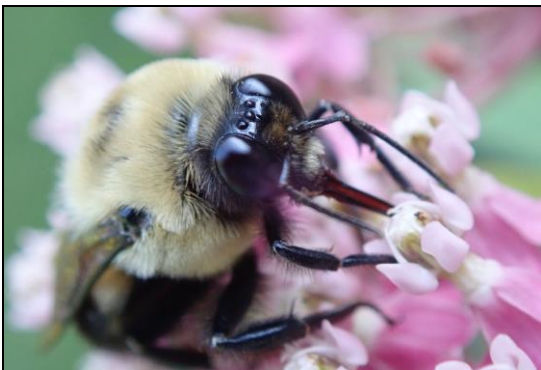


National Association of Conservation Districts

Marinette County had 69 posters from five area schools enter in the 2018-2019 Environmental Poster Contest. The theme this year was DIG DEEPER: LIFE IN THE SOIL. We had one poster by Cora Parchim (2nd grade) in the Elementary Division move to the State Contest in Lake Geneva early in March. To see this poster and the other winners, please visit: <http://www.marinettecounty.com/news-and-announcements/?i=20bbf4848634>.



Need Native Plant, Pollinator, or other Information for your Yard?



Need guidance with upcoming landscape projects involving native plants, pollinator or butterfly gardening, improving wildlife habitat, or similar topics? Come visit the Marinette County Land & Water Conservation Division and UW-Extension, both located at the Land Information Office on the first floor of the Marinette County Courthouse. There are many available flyers, brochures, guides, and other materials available to help with your project.

Staff from LWCD & UWEX can answer questions you may have or help with suggestions. Visit the LWCD, UWEX, & NLMGA on Facebook, or call 715-732-7784 (LWCD) or 715-732-7510 (UWEX) for more information.

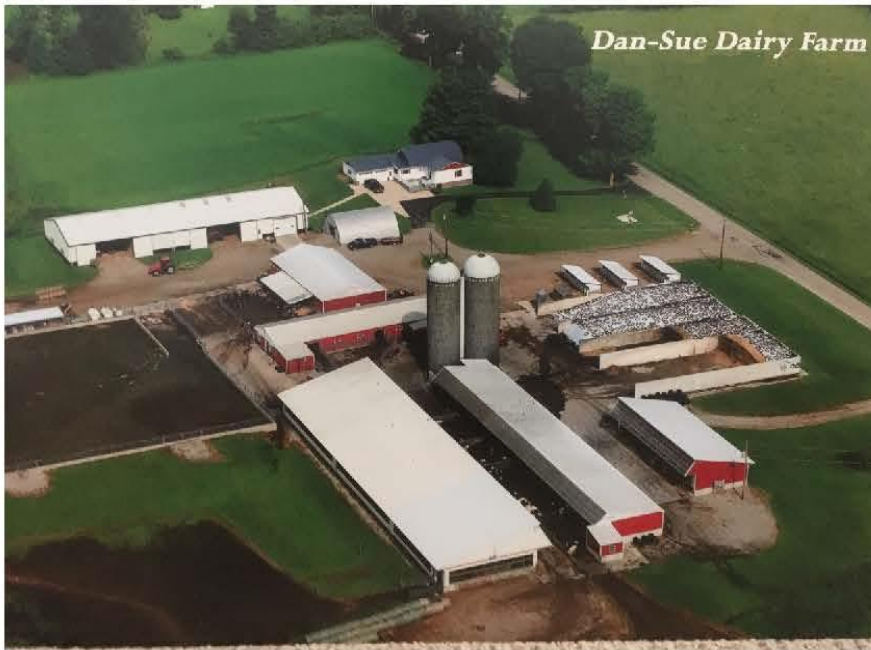


Marinette County Breakfast on the Farm

Sunday, June 30, 2019, 7:30 a.m. to Noon

Dan, Sue, Eric, Jamie Van De Walle Farm

W5467 Red School Rd, Peshtigo, WI



Pancakes, eggs, sausages, cheese curds, maple syrup, applesauce, milk, juice, coffee, ice cream sundaes,
Adults – \$7.00 / Children 6-10 – \$4.00, Children 5 yrs & under – FREE
(No advanced ticket sales)
Petting zoo, Moo-Mania comedy show, kiddie tractor pull, face painting, balloons, kids bouncy play area, viewing of barns & cattle, wagon rides, music

Like us on Facebook—Marinette County Breakfast on the Farm
& Marinette County Dairy Promotions WI

PLEASE JOIN US FOR BREAKFAST ON THE FARM!

In the spring of 1985 Dan and Sue Van De Walle, along with their young sons came to the England Century Farm to work for Bob and Peggy England. Dan and Sue worked with the 45-cow milking herd for 6 years before taking over the operation in July of 1991. With the change in ownership came a change in name, the farm was now known as Dan-Sue Dairy. Together with their sons they worked to grow the farm. The addition of a machine shed in 1996 and feed bunkers in 2000 were the first steps in creating an efficient and effective farming operation.

In 2002, upon graduation from high school; their son Eric joined his parents in running the farm. Upon Eric's increased involvement in the operation of the farm the work was done to set the farm up for the future with some changes in facilities and to make things easier for the day to day operations. A free stall barn was built in 2004 to house the 70 head of milking cattle as well as dry cows. In 2006, Dan-Sue Dairy graciously hosted Breakfast on the Farm and show cased their dedication to caring for their 200 head of cattle, farming 400 acres and producing high quality milk as well as being involved in the community.

In 2008, the farm changed from the stanchion barn to milk the cows to the current double 6 parallel parlor. This eased the physical labor on Dan, Sue and Eric and created more comfort for the cows. They also added the manure pit at that time which aids in the manure management plans and their commitment to being good stewards of the land.

Since 2008 there have been further facility additions for young stock particularly the youngest animals. In 2015 two additional feed bunkers were added along with a collection system to capture the drainage from the feed center. As the herd continues to grow Dan-Sue Dairy has built a transition barn for the calves and added additional stalls and pens to the free stall barn.

The family on the farm grew in 2013 with the addition of Eric's wife, Jamie and daughter Riley. Together with Dan and Sue they are working to maintain the family legacy of dairy farming by maintaining the original standards of exceptional animal care, good stewardship of the land and looking for opportunities to be efficient, progressive and positive. Dan-Sue Dairy's success is found in the dedication to family and without them we would not be where we are today.

Any Questions contact Corey Kuchta @ 920-660-4182

Thank you to the following businesses for supporting the 2018 Breakfast on the Farm in money or in kind donations last year:

Platinum—\$1,000 or more

A&C Sawdust
Beaver Machine Inc
Carlson Farms
Charapata Seed Sales
Greenstone Farm Credit
Kozlovsky Dairy Equipment, Inc
Larsen Cooperative
Meatski's
Mt. Morris Mutual Insurance
Patz Corporation
24/7 Well & Pump Service
Gold—\$500- \$999
Beaver Brook Maple Syrup
BMO Harris Bank
Crivitz Redi-Mix
Dan Risner & Son Excavating
Dan, Sue, Eric, Jamie Van De Walle
Eric Schroeder Trucking
Eric Stank Trucking
Genex Co-op
Golden Ridge Dairy LLC
Hoppe Dairy
Jandt Farms
Kotecki Veterinary Service

Land O Lakes Inc
Peshtigo Feed Mill
Riesterer & Schnell Inc.
Springside Cheese Corp.
Swiderski Equipment
Waupaca Foundry
Wisconsin Public Service
Witts Piggly Wiggly & Ace HDW
Silver—\$250-499
Bay Area Medical Center
Belgioioso Cheese Inc
Biehl Construction
Blaser Acres
Coleman United Coop Shipping Assoc
Cornette Farm Supply & Vita Plus Corp
Country Visions Cooperative
Culvers
Dair-Ray Vet Service
Dairy Department Inc
Dan Bieber Equipment LLC
DJ Schroeder Trucking LLC
Energy Solutions
Foxland Harvestore/Valley Bldg Systm
Great American Disposal
Graese Electric
Graef Transport Inc
Investors Community Bank
Jerry & Tricia Zeitler
Katie's Subs
Kaufman Farms
Keith & Nancy Hartwig

Kuchta Farms
Menza & Zak Heating & Cooling
N-K-S Tire Sales & Service
Oconto Electric Cooperative
Oconto Falls Insurance Center
P&D Sales and Service
Patz Maple & Honey Farms
Pelkins Piggly Wiggly
Petal n'Roots
Peshtigo National Bank
Peshtigo Times/Times Saver
Peters Concrete Co
Rhodes-Charapata Funeral Home
Saputo Cheese, USA
Strutz Farms
Tappin' Teachers
Van De Walle Farms
Wagner Sugar Hill
Wagner-Casper Ins. Agency
WI-MI Insurance Agency
Bronze—\$100-249
Agropur Inc
Alternative Animal Bedding
Animal Health Clinic
Animart
Badgerland Cattle Inc
Burger King of Marinette
Chrysler World
Coleman Pound Lioness Club
Countryside Veterinary Clinic LLC
Crivitz Pharmacy
Crivitz Veterinary Clinic Inc.
Dairyland Seed Co Inc

De Laval Dairy Service
Dufek Livestock Trucking LLC
Dumke Bros.
Equity Livestock Auction
Farmers & Merchants Bank & Trust
Frank's Logging
Gendron's Inc
Graetz Mfg.
Great Lakes Foods
H.J. Dudkiewicz & Sons, Inc.
Holley's Harvest
Hosking Electrical Service
Ideal Tent & Party
Insight FS
Jakes Sales & Service
KBM Construction
Kevin J Pepin D. D.S. S.C.
Marinette County Farm Bureau
Marinette Co Holstein Association
Midwest Sidewalls
North Tech Plumbing
North Wood Flooring
Oconto County Lumber, Inc
Precision Carts
Rymer Heating LLC
Scheffen Electric
Seefeldt Farms
Starzer Repair
Stephenson National Bank & Trust
United Cooperative
UW-Extension Marinette County
Village Pharmacy Inc
Waldvogel Trucking
Wisconsin Building Supply
Zeitler Agri-Center, Inc
Zorn Trucking



Area Events Calendar

May 29	Area Museums Open. Marinette & Menominee County Historical Museums, Peshtigo Fire Museum, Amberg Historical Complex, Busville Doll Museum (Crivitz), Land of Oz Museum (Wausaukee) & West Shore Fishing Museum (M-35 north of Menominee, MI). Visit http://therealnorth.com/index.php/features/museums or call Marinette/Menominee Area Chamber of Commerce at (715) 735-6681.
May 23 – Aug. 29	Crivitz Flea & Farmers’ Market , each Thursday May 23 through August 29, 8am-4pm located at the St. Mary’s Catholic Church parking lot across from the Village Hall at 800 Henriette Avenue. Wide variety of vendors with handmade arts & crafts, antiques, collectables and much more! Contact Barbara Uhl at 715-854-2030 or buhl@vocwi.com to rent space by day or season up to first market date. BONUS FLEA MARKET – July 4, 2019 8am – 4pm.
June-October	Out to Lunch. Every Wednesday at Stephenson Island, located North on Hwy 41, off the Interstate Bridge between the WI and MI borders, beginning June 19 from 11 a.m. to 1 pm. Includes Farmers Market. 2pm-6pm on Fridays, no Saturdays. For more information, please call 715-732-4333.
June-Sept.	Forgotten Fire Winery Summer Concert Series. Join the fun in Peshtigo every Saturday in June, July, August and September for the outdoor concerts. Music starts at noon and ends at 4 p.m. No carry-ins please. Visit www.forgottenfirewinery.com/events for a full listing of artists performing during the 2019 season. Summer Concert starts on June 8 from Noon to 4pm featuring Charlie Scoggins.
June 1	K9 Unit 5K Run/Walk. Held at Marina Park, Menominee at 8 a.m. Dogs welcome! Forms available at Marinette City Hall, YMCA, Mighty Pet Store in Menominee, and online at mmymca.org under the “Events” tab. \$20 for adults; \$10 for children 6 to 12 years; free for 5 and younger. Same-day registration is \$25 for adults and \$12 for children, and is available at the park between 7 and 7:45 a.m. Event held rain or shine, snacks provided. For more information, visit http://mmymca.org/documents/Riggs_run_brochure3.7.19.pdf .
June 1-Sept. 28	Menominee Historic Downtown Farmers’ Market opens through September 28. Located on 800 First Street, downtown Menominee (Saturdays 9 a.m. to noon) For more information contact Lucy Pier, Market Manager at 906-863-8718.
June 7-9	Copperfest in Oconto. 37th Year! Fabulous weekend of family fun with live music, entertainment, children’s activities, street market, & plenty of refreshments. Friday 5-11p.m., Saturday 11a.m.-midnight, Sunday 11a.m.-5p.m. Small admission fee. For more information call Oconto Chamber of Commerce at (920) 834-6254.
June 8-9	Michigan’s Free Fishing Weekend. Two days twice a year, families & friends can enjoy Michigan Fishing, for FREE! All fishing license fees will be waived for two days. Residents & visitors can fish on both inland and Great Lakes' waters for all species of fish. All other fishing regulations still apply. Call 906-228-6561 for more information.
June 8	Annual Kids’ Fishing Derby. Menominee Marina on First St. 8:00 to 11:00 am. Sponsored by M & M Great Lakes Sport Fisherman.
June 8	3rd Annual Marinette/Menominee Bigfoot Convention. Held at the Pullman Center Whistle Stop, N2190 U.S. 41, Menominee from 10 a.m. to 4 p.m. Doors open at 9 a.m. Presentations start at 10:00-4:00cst and will cover topics such as, Bigfoot, Native American Beliefs and the physiological effects on eyewitnesses after encountering Bigfoot. All proceeds will benefit next year’s convention. Admission is \$10.00. For more information, persons may call 906-863-1135.
June 11	Concerts in the Park ~ Stephenson Island, Marinette. 6:00 pm Stephenson Island at Chamber of Commerce Performance Center. Highway 41 Interstate Bridge, Marinette, WI Hayley Grace & Alexis Ray will be playing.
June 12	Bands at Badger Park. Badger Park in Peshtigo. Wednesday nights, 6:- 8pm. Daze 2 Nites. Free musical entertainment with concessions available at 5:00pm. Call Peshtigo Chamber of Commerce at 715-582-0327 for more information.
June 13 - Aug. 22	Movie in the Park. Held at the Crivitz Community Veterans Park, 515 Park Place. Begins at 8:45 pm. Community ED provides free water and popcorn. Bring a blanket or chair for seating. Movie cancelled in case of rain. For more information, please contact Jolene Huc at 715-927-3184. June 13 th Movie is Hotel Transylvania 3 .
June 15	8th Annual Jim Hodge Memorial Run. All proceeds will be directed to the BAMC Foundation to support patients with lung issues and to promote organ donation in the Marinette/Menominee community. All donations are tax deductible. Run will be held at the YMCA in Menominee. Cost is \$25 for 5K.and 10K. to sign up go to www.bamc.org/foundation/jim-hodge-memorial-run/ .
June 15	Annual Equity Park Flea Market/Craft Fair. 9am to 3 pm. At Equity Park on State Highway 64. For more information call Shirley at 920-591-0237.
June 15-23	37th Porterfield Country Music Festival. Green’s Green Acres, 6 miles west of Marinette just off Hwy 64. Original artists, camping, live music, concessions and Nashville stars. Check www.countrymusicfestival.com or call 866-456-4333 for info & tickets, 715-789-2130 for camping and 920-834-2465 for concessions.
June 19	Out to Lunch ~ Welcome Center by Interstate Bridge – Starts today! Every Wednesday from 11 am to 1 pm. Music, food trucks, & Farmers Market.
June 20	Concert in the Park ~ Menominee Marina Bandshell. First Street. The Oscillators will be playing. 6 – 8pm.
June 26	Bands at Badger Park. Badger Park in Peshtigo. Wednesday nights, 6-8pm. Sunny and the Heat. Free musical entertainment with concessions available at 5:00pm. Call Peshtigo Chamber of Commerce at 715-582-0327 for more information.
June 29	PTSD Run for Recovery 5k Run/1 mile Walk. Sponsored by American Legion Post 413 to raise awareness about PTSD, how it affects veterans and their families, and to show honor & support to all our veterans, past and present. All funds raised are donated to two organizations that help veterans with PTSD. For more information call 920-475-8889.
June 29	Meet the Fleet ~ Come and take a ride on a sailboat – sponsored by the M & M Yacht Club. Please call for reservations (906) 863-7140.
June 30	Annual Art for All. Art show and sale will take place at the Great Lakes Memorial Park from 10am-4pm with over 50 artists from all over the Midwest participating. This is a free event. Visit Art for All on Facebook or visit www.artforallinc.com . Rain or shine.
June 30	Leow Strong Bike Ride. Formerly the Menominee River Century Bike Ride. Begins at Marinette High School on Pierce Avenue in Marinette. This ride includes 9, 25 and 50-mile routes. . For more information and to register, visit www.bamc.org/foundation/leowstrong or find us on Facebook!
June 30	Breakfast on the Farm. 7:30 am – noon at Dan-Sue & Son Dairy Farm. Enjoy some great food and then tour the farm operations and other displays. Look it up on Facebook. Located 2 miles southeast of State Highway 64/County Road W intersection in Town of Grover. For more information, contact UW-Extension at 715-732-7510. Check out the article on page 7.
July 6	Wausaukee 4th of July Celebration 9am. Wausaukee 4 th of July Celebration, parade, kids games, food, beverages, live music, and fireworks at dusk. Parade on Main Street with celebration held at Steve Stumbris Memorial Park.

Harmony Arboretum Schedule of Events



Located seven miles west of the City of Marinette off of Highway 64, then ½ mile south on County E (#N8390). All programs are free unless otherwise stated. For more information, call UW-Extension at 715-732-7510 or Land & Water Conservation at 715-732-7780.

June 1 - Bird Hike, 6:00 - 8:00 am

Take a guided hike through the Harmony Hardwoods to learn about our native forest bird species. Field guides and some binoculars will be available. *See page 1 for more information.*

June 12 – Moss Gardens, 6:30-8:00 pm

Join Master Gardener Volunteers as they showcase how moss can be used in the home landscape. The newly renovated shade garden will house this discussion.

June 18 – Vegetable Garden Pest Management, 6:30-8:00 pm

Vegetable growth is in full gear at this time of the year, but so are all the insects, diseases, and weeds that can negatively impact vegetables. Join in the discussion and hands-on identification at this session led by UW-Extension Horticulture Agent Scott Reuss.

June 30 - Marinette County Breakfast on the Farm, 7:30 am - noon

Annual all-you-can eat and family-oriented activities event. Enjoy great food, then tour the farm operations and other displays. Look it up on Facebook. Hosted by *Dan-Sue & Son Dairy Farm*, 2 miles southeast of Hwy. 64/Cty. W intersection in Town of Grover. *See page 7 for more information.*

July 2 – Landscape Plant Disease ID and Management, 2:00-4:00 pm

Join Dr. Brian Hudelson, UW Plant Disease Diagnostician, for a hands-on opportunity to learn about both common and unusual diseases that affect our landscape plants. His insight will help you be able to better identify and manage these disease. Attendees are welcome to bring samples from their own landscapes.

Northwoods Journal Volume 17, Issue 1

The *Northwoods Journal* focuses on various outdoor recreation opportunities and local environmental topics to inform readers about natural resource use, management, and recreation in Marinette County.

Published in cooperation by:

- Marinette Co. Land & Water Conservation
- Marinette Co. Parks & Outdoor Recreation
- Marinette Co. UW-Extension

UW-Extension provides equal opportunities in employment and programming, including Title IX and ADA. To ensure equal access, please make requests for reasonable accommodations as soon as possible prior to the scheduled program. If you need this material in another format, please contact the UW-Extension office at 715-732-7510.

Please send comments to:
Marinette County LWCD
1926 Hall Ave, Marinette, WI 54143
abartels@marinettecounty.com

